

Claims:

1. A device for producing a gas-liquid mixture and, in particular, air-water mixture in the region of cutting tools, particularly chisels, arranged on at least one cutter head (10) or cutter drum rotationally mounted on a cutter arm (5) of a cutting machine (1), including at least one nozzle pair comprised of a nozzle (14) for ejecting a gas jet and a nozzle (13) for ejecting a liquid jet, the axes (17, 18) of the nozzles (13, 14) of a nozzle pair being oriented in a manner that the jets impinge on each other at a distance from the outlet openings of said nozzles, characterized in that the axes (17, 18) of the nozzles (13, 14) of a nozzle pair form an angle with each other of between 45 and 135°, preferably between 75 and 85°.
2. A device according to claim 1, characterized in that the crossing point of the axes (17, 18) of the nozzles (13, 14) of a nozzle pair is located at a distance of less than 100 mm, preferably less than 50 mm, particularly preferred about 8 mm, from the nozzle outlet opening of the gas nozzle (14).
3. A device according to claim 1 or 2, characterized in that the outlet angles of the liquid nozzles (13) amount to between 5° and 10°.
4. A device according to claim 1, 2 or 3, characterized in that the liquid nozzles (13) are designed as circular section jet nozzles whose outlet openings preferably have diameters of about 1 mm.
5. A device according to any one of claims 1 to 4, characterized in that the diameters of the outlet openings

of the gas nozzles (14) are at last 3 mm and, preferably, about 5 mm.

6. A device according to any one of claims 1 to 5,  
5 characterized in that the gas nozzles (4) are configured to include a whirl chamber arranged upstream of said outlet opening to generate turbulent flows.

7. A device according to any one of claims 1 to 6,  
10 characterized in that the gas nozzles (14) are designed for a gas supply pressure of 0.6 to 1.5 bar and the liquid nozzles (13) are designed for a liquid supply pressure of 4 to 5 bar.

15 8. A device according to any one of claims 1 to 7, characterized in that the axes (18) of the gas nozzles (14) are arranged to be directed onto the cutting tools and, in particular, tips of the chisels.

20 9. A device according to any one of claims 1 to 8, characterized in that a plurality of nozzle pairs are arranged on a nozzle assembly (12) connected with the cutter arm (5) and extending parallel with the axis of rotation of the cutter head (8).

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10. A device according to any one of claims 1 to 9, characterized in that the distance of neighboring nozzle pairs is less than 150 mm.

30 11. A device according to any one of claims 1 to 10, characterized in that the nozzles (13, 14) are pivotally mounted in the nozzle assembly (12).